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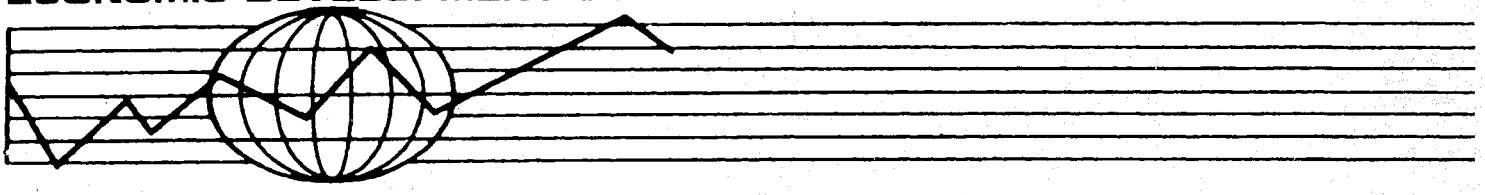

CULTURAL ENDOWMENTS AND ECONOMIC DEVELOPMENT: WHAT CAN WE LEARN FROM ANTHROPOLOGY?

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CULTURAL ENDOWMENTS AND ECONOMIC DEVELOPMENT: WHAT CAN WE LEARN FROM ANTHROPOLOGY?*

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In research conducted over the last decade and a half, Yujiro Hayami and I have outlined a model of economic development in which both technical and institutional change were treated as largely endogenous to the economic system.[1] Technical change is treated as induced by changes in factor supplies and product demand and by institutional change. Institutional change is treated as induced by changes in factor supplies and product demand and by technical change. Advances in natural science knowledge reduce the cost of technical change and advances in social science knowledge reduce the cost of institutional change. This induced innovation model was tested against historical experience in both developed and developing countries. The tests of the induced technical change hypothesis were much more rigorous than the tests of the induced institutional change hypothesis.

A Pattern Model

We have also made some preliminary suggestions concerning the relationships between cultural endowments and technical and institutional change.[2] The pattern model that we used to map the general equilibrium relationships between resource endowments, cultural endowments, technology and institutions is reproduced here as Figure 1. The model suggests the importance of going beyond the conventional general equilibrium model in which resource endowments, technologies, institutions and culture are treated as given. In the study of long-term social and economic change the

The formal microeconomic models used in the Hayami-Ruttan work and in the work of others to analyze the supply and demand for technical and institutional change can be thought of as "nested" within the general equilibrium framework of Figure 1.

One advantage of the "pattern model" outlined in Figure 1 is that it helps to identify areas of ignorance. Our capacity to model and test the relationships between resource endowments and technical change is relatively strong. Our capacity to model and test the relationships between cultural endowments and either technical or institutional change is relatively weak. A second advantage of the model is that it is useful in identifying the components that enter into other attempts to account for secular economic and social change. Failure to analyze historical change in a general equilibrium context tends to result in a unidimensional perspective on the relationships bearing on technical and institutional change.

For example, historians working within the Marxist tradition often tend to view technical change as dominating both institutional and cultural change. In his book Oriental Despotism, Karl Wittfogel views the irrigation technology used in wet rice cultivation in East Asia as determining political organization.[3] As it applies to Figure 1, his primary emphasis was on the impact of resources and technology on institutions (B) and (C).

A serious misunderstanding can be observed in contemporary neo-Marxian critiques of the green revolution. These criticisms have focused attention almost entirely on the impact of technical change on labor and land tenure relations. Both the radical and populist critics have emphasized relation (B). But they have tended to ignore relationships (A) and (C). This bias has led to repeated failure to identify effectively the separate effects of

population growth and technical change on the growth and distribution of income.

The analytical power of the more complete induced innovation model is illustrated in the Laguna Village (Philippines) study by Yujiro Hayami and Masao Kikuchi.[4] In Laguna increases in population pressure (C) and technical change in rice production (B) resulted in substantial change in both land tenure and labor market relationships between the mid 1950's and the mid 1970's.

Armen Alchian and Harold Demsetz identify a primary function of property rights as guiding incentives to achieve greater internalization of externalities.[5] They consider that the clear specification of property rights reduces transaction costs in the face of growing competition for the use of scarce resources as a result of population growth and/or growth in product demand. Douglass North and Robert P. Thomas, building on the Alchian-Demsetz paradigm, attempted to explain the economic growth of western Europe between 900 and 1700 primarily in terms of changes in property institutions.[6] During the eleventh and thirteenth centuries the pressure of population against increasingly scarce land resources induced innovations in property rights that in turn created profitable opportunities for the generation and adoption of labor-intensive technical changes in agriculture. The population decline in the fourteenth and fifteenth centuries was viewed as a primary factor leading to the demise of feudalism and the rise of the national state (line C). These institutional changes in turn opened up new possibilities for economies of scale in nonagricultural production and in trade (line b).

In a more recent work, Mancur Olson has emphasized the proliferation of institutions as a source of economic decline.[7] He also regards broad-based encompassing organizations as having incentives to generate growth and redistribute incomes to their members with little excess burden. For example, a broadly based coalition that encompasses the majority of agricultural producers is more likely to exert political pressure for growth-oriented policies that will enable its members to obtain a larger share of a larger national product than a smaller organization that represents the interests of the producers of a single commodity. Small organizations representing narrow interest groups are more likely to pursue the interests of their members at the expense of the welfare of other producers and the general public. In contrast, an even more broadly based farmer-labor coalition would be more concerned with promoting economic growth than would an organization representing a single sector. But large groups, in Olson's view, are inherently unstable because rational individuals will tend not to incur the costs of contributing to the realization of the large group program -- they have strong incentives to act as free riders. As a result, organizational "space" in a stable society will be increasingly occupied by special interest "distributional coalitions." These distributional coalitions make political life divisive. They slow down the adoption of new technologies (line b) and limit the capacity to reallocate resources (line c). The effect is to slow down economic growth or in some cases initiate a period of economic decline.

Cultural Endowments in Development Economics

While substantial progress has been made (in economics at least) within a partial equilibrium framework to analyze the sources and impact of technical and institutional change, almost no attention has been devoted by economists to the role of cultural endowments. To the extent that cultural endowments are considered at all by economists they tend to be subsumed under the concept of tastes. And tastes, even more so than technology and institutions, are traditionally regarded as not subject to economic analysis.[8]

At an intuitive level we have little difficulty in accepting the view that cultural endowments, including religion and ideology, exert at least some influence on the supply of institutional innovation. Cultural endowments make some forms of institutional change less costly to establish and impose severe costs on others.

It has been argued, for example, that the traditional moral obligation in the Japanese village community to cooperate in communal infrastructure maintenance has made it less costly to implement rural development programs than in societies lacking such traditions.[9] The traditional patterns of cooperation have represented an important cultural resource on which to erect modern forms of cooperative marketing and joint farming activities. In China, communist ideology, reinforced by the lessons learned during the guerrilla period in Yenan, inspired the mobilization of communal resources to build irrigation systems and other forms of overhead capital.[10] Similar cultural endowments are not available in South Asian villages where, for example, the caste structure inhibits cooperation and encourages specialization.

In the cases cited above, cultural endowments acted to shift the supply of institutional innovation to the right -- to reduce the cost of institutional change. In the development literature, cultural endowments are more frequently viewed as obstacles to technical or institutional change. Kusum Nair insists that the differential response to the green revolution seed-fertilizer technology among regions in India can be explained, at least in part, on cultural grounds.[11] Foster has argued that indigenous innovation in peasant societies is blocked by an "Image of Limited Good"--"peasants view their social, economic and natural universe--their total environment--as one in which all of the desired things in life such as land, wealth, health, friendship and love, manliness and honor, respect and status, power and influence, security and safety exist in a finite quality and are always in short supply."[12] It has been argued that a primary explanation for British economic decline over the last century has been a set of cultural changes associated with the "gentrification" of bourgeois culture--"the rooting of pseudoaristocratic attitudes and values on upper-middle-class educated opinion shaped an unfavorable context for economic endeavor."[13]

The first post-war generation of development economists gave a prominent role, at least at the rhetorical level, to the role of cultural endowments in constraining or facilitating economic growth. They accepted the body of scholarship in history, philosophy, anthropology, sociology and political science that insisted that cultural endowments exerted major impact on behavior and hence on the response in traditional societies to the opportunities associated with the modernization of community life and the

possibilities of national economic development.[14] Without attempting to be exhaustive let me refer to the work of Bert F. Hoselitz, Everett E. Hagen, Irma Adelman and Cynthia Taft Morris, Gunnar Myrdal and P.T. Bauer. I emphasize the work of Hoselitz because of his interdisciplinary entrepreneurship; Hagen because of his attempt to develop a unified theory of social change; Adelman and Morris because of their effort to quantify the role of socio-cultural variables; Myrdal because of his effort to take cultural variables explicitly into account in development policy reform; and Bauer because of the influence his work has had on current development assistance policy.

Hoselitz

Burt F. Hoselitz played a particularly important entrepreneurial role in the 1950's in urging economists to give greater consideration to the role of cultural factors in economic development. His activities included the organization of the Center on Economic Development and Cultural Change at the University of Chicago and the founding of the Journal of Economic Development and Cultural Change. He authored and edited a number of influential publications dealing with non-economic barriers to economic development.[15] Among the non-economic factors identified by Hoselitz in his 1952 article were: (a) the emergence of cultural minorities or classes that serve as the spearhead for both technical and institutional change; (b) a social and political system that encourages a high degree of social mobility; (c) a social and cultural environment that facilitates the development of institutions capable of generating the technical and institutional knowledge necessary to operate a modern society; (d) the

weakening of commitment to traditional methods of production and institutions.

This last consideration was particulary important in Hoselitz's view since traditional "value systems offer special resistance to change. . . their change is facilitated if the material economic environment in which they can flourish is destroyed or weakened...Economic development plans which combine industrialization with an extension of traditional or near traditional forms of agriculture are thus creating a dilemma which in the long run may present serious repercussions in the speed or facility with which ultimate objectives can be reached."[16]

Hagen

The most ambitious attempt to incorporate cultural variables into the analysis of economic development was that of Everett E. Hagen. Hagen argued that advances in the fields of anthropology, sociology, psychology and economics had reached the point where a synthesis could be achieved to form a unified theory of society and social change.[17] He drew on the literature from these fields to analyze the development history of England, Japan, Colombia, Indonesia, Burma and the Sioux.

Hagen's analysis led him to place primary emphasis on personality formation. He argued that the interrelationships between personality formation and social structure are such that social change could not occur without prior or concurrent personality change.[18] Such factors as political development, nationalization, religious change, urbanization, infrastructure development, and commercial innovation are "primarily incidents in the process of change but not initial causal factors in change."[19]

Traditional societies were characterized by authoritarian personality. "The image of the world...includes a perception of uncontrollable forces...Each individual finds his place in the authoritarian hierarchy of human relationships..."[20] In his historical studies Hagen gave particular attention to the emergence of personality characteristics conducive to innovation. In a retrospective review in 1980 Hagen argues that a disproportional share of entrepreneurs are drawn from social groups that were excluded from traditional elite roles.[21] Hagen's work received enthusiastic reviews. But in retrospect it must be seen as the culmination of an effort to enrich the theory of development by drawing on anthropology, sociology and psychology rather than as the foundation for further advances.

Adelman and Morris

The most serious effort by economists to obtain quantitative estimates of association between socio-cultural variables and economic development has been by Irma Adelman and Cynthia Taft Morris.[22] Their approach, in their 1965 and 1967 work, has been to use factor analysis techniques to compress a large set of indicators into groups of closely associated socio-cultural, political and economic indicators of the development process.[23] Among the indicators selected to reflect change in socio-cultural endowments were the size of the traditional agricultural sector, the extent of dualism, the character of basic social organization, the extent of social mobility and the degree of ethnic homogeneity. The analysis is performed first for a set of seventy-four countries and then for three subsets classified by level of development. An attempt is made to differentiate between long run and short run patterns of association by performing the analysis first without and

then with a group of economic variables which can be interpreted as response to short run policy interventions.

Adelman and Morris emphasize that the "relationships found between levels of economic development and differences in social and political structure are neither caused nor causal. Rather they reflect the interaction of an organic system of institutional and behavioral change which underlies the process of economic development."[24]

But they do draw some fairly firm conclusions. During the earliest stage of development, cultural and social constraints are a burden on economic growth. The socio-cultural environment must be transformed in order to enlarge the scope for economic activity.[25] Furthermore, their research "suggests that one may look at the entire process of national modernization as the progressive differentiation of the social, economic, and political spheres from each other and the development of specialized institutions and attitudes within each sphere. More specifically, the process of economic development in underdeveloped countries consists basically of the separation of the economic sphere, first from the complex of social organization and the norms that govern it, and, subsequently and to a lesser extent, from the political environment by which it is constrained.[26]

Adelman and Morris suggest that the appropriate policy mix will differ depending on the level of development. At low levels of development the growth of the market sector and the narrowing of dualism among sectors should have high priority. During an intermedial level, social tensions increase as income distribution becomes more unequal. At this stage

political development that is capable of reducing stress among social classes becomes particularly important.

Myrdal

The most ambitious effort by an economist to employ cultural variables to interpret economic behavior and to assess the prospects for growth, and to prescribe economic policy was the massive study of South Asian development by Gunnar Myrdal, Asian Drama: An Inquiry into the Poverty of Nations.[27] Myrdal contrasts the modernization ideals, which represent the official ideology of a Westernized elite, with the traditional values of the rest of society. The official creed, held by the politically alert, articulate and active part of the population, particularly by the intellectuals, emphasized the values that, in the West, were a product of the Enlightenment--rationality, equity, efficiency, diligence, honesty, innovation, national independence, democracy, social disciplines.[28]

Although Myrdal regards easy speculation regarding the impact of personality, culture and religion as unscientific, his research leads him to the view that the people of South Asia "have lived for a long time under conditions very different from those in the Western world and this has left its mark upon their bodies and minds. Religion has, then, become the emotional container of this whole way of life and work and by its sanction has rendered it rigid and resistent to change."[29] Popular religion sanctifies a whole system of life and work, attitudes and institutions, that contribute to "the resistance of that system to planned, induced changes along the lines of the modernization ideal."[30] But this weight of social and political inertia must be overcome by planned development.

But planning and plan implementation in South Asia are inhibited by political limitations that Myrdal labels as the "soft state." Policies decided on are not enforced. The authorities are reluctant to place obligations on people. "Planning for development requires a readiness to place obligations on people in all social strata to a much greater extent than is done in any of the South Asian countries...Under present South Asian conditions development cannot be achieved without much more social discipline than the prevailing interpretation of democracy in the region permits."[31] At times Myrdal comes close to implying that economic development in South Asia can only be achieved by an authoritarian socialist regime--but without Stalin or Mao. In a retrospective view, published in 1984, Myrdal still regards the failure of the "soft state" to achieve internal reforms as a major obstacle to development.[32]

Bauer

The role of cultural endowments in economic development has also been a consistent theme in the work of P. T. Bauer. Bauer has insisted, and continues to insist, that successful development in poor countries has not been the result of "the forced mobilization of their resources. Nor was it the result of forcible modernization of attitudes and behavior, nor of large-scale state-sponsored industrialization, nor of any other form of big push. And it was not brought about by the achievement of political independence, ... or by any other form of political or cultural revolution."[33]

Bauer does insist that economic achievement and progress "depend largely on human aptitude and attitudes, on social and political institutions and arrangements ..., on historical experience and to a lesser

extent on external contact, market opportunities and natural resources."[34] Cultural endowments, reflected in differences among ethnic groups, have been particularly emphasized by Bauer. He has repeatedly drawn on his early studies in Southeast Asia.

"Many rubber estates kept records of the daily output of each tapper, and distinguished between the output of the Chinese and Indian workers. The output of the Chinese was usually more than double that of the Indians, with all of them using the same equipment of tapping knife, latex cup, and bucket. There were similar or even wider differences between Chinese, Indian and Malay smallholders.... The pronounced differences between Chinese and Indians could not be attributed to the special characteristics often possessed by migrants, as both groups were recent immigrants. The great majority of both Indians and Chinese were uneducated coolies, so that the differences in their performance could not be explained in terms of differences in human capital formation. ...I was to encounter similar phenomena in West Africa, in the Levant, in India, and elsewhere. ... differences in economic performance among different cultural groups as a feature of much of economic history...[35]

Bauer's perspective has not been reinforced by new investigations. It has retained its currency through frequent repetition. Myrdal and Bauer share remarkably similar views on the role of cultural constraints on economic development. This does not lead them to similar views on development policy. Myrdal's enthusiasm for strong state intervention is countered by Bauer's faith in market forces.

In spite of the wide attention that each of the five bodies of work reviewed in this section has received, their work has not been incorporated

into mainstream economics or economic development thought. Professional opinion in economics has not dealt kindly with the reputations of those development economists who have made serious efforts to incorporate cultural variables into development theory or into the analysis of the development process. Their work has typically been favorably reviewed and then ignored. Their work has had wider currency outside than within the field of economic development. There has been no rush by other scholars or by graduate students to refine or test either their theory or their results.

A premature obituary to the cultural endowments school was pronounced by Albert O. Hirschman in a 1965 article.[36] In his review Hirschman grouped the several cultural barriers referred to in the literature as (a) obstacles that turn into assets, (b) obstacles whose elimination turns out to be unnecessary, and (c) obstacles whose elimination is postponable. The publication in 1963 of Transforming Traditional Agriculture by T. W. Schultz, which shifted attention from peasant culture as an obstacle to development and set forth the "poor but efficient" view of the peasant cultivator in traditional societies, was even more influential (though not referred to by Hirschman) in turning the attention of development economists away from the issue of cultural factors in development.[37] But it was the rapid adoption of green revolution agricultural technology by peasant producers throughout Asia that gave plausibility to the Hirschman and Schultz skepticism.

Experience has taught us, over the last quarter century, that when peasants refuse to adopt the practices recommended by agronomists and economists, it may be the experts rather than the peasants who are

wrong. But in spite of the failure of research on the economic implications of cultural endowments to find a secure place in economic development literature or thought, the conviction that "culture matters" remains pervasive in the underworld of development thought and practice. The fact that the scholars and practitioners of development are forced to deal with cultural endowments at an intuitive level rather than in analytical terms should be regarded as a deficiency in professional capacity rather than as evidence that culture doesn't matter.

In the 1985 edition of Agricultural Development, Yujiro Hayami and I, while insisting on the potential significance of cultural endowments, argued that until our colleagues in the other social sciences are able to provide us with more helpful analytical tools, economists are forced to adhere to a strategy of exploring how far modest extensions of micro economic theory can take us in the analysis of both the sources and impact of technical and institutional change.[38]

Although I continue to adhere to a strategy that one should first try to understand economic phenomena primarily in economic terms, it may be time to again assess what the advances in the other social sciences might be able to contribute to a new generation of development economists that was not available to those of us who began our work on economic development in the 1950's and 1960's. In the next section of this paper I attempt to examine some of the potential contributions from the field of anthropology.

Why Anthropology?

There are a number of reasons that one might look to the field of anthropology for guidance in attempting to understand the sources and impact of cultural endowments on economic development. One is that anthropology

has traditionally embraced a broad conception of culture. The term culture was used by the early anthropologists such as Edward Bennet Taylor and Franz Boas "to designate the totality of human social behavior that was independent of the genetic constitution and biological characteristics of organisms."[39] In this view, culture comprised the totality of inherited artifacts, material goods, technical processes, and mental constructs. Over time, however, distinct traditions of physical and cultural anthropology emerged. Cultural anthropology focused on the evolution and diffusion of custom, social organization, values and ideology.[40] Since the now classic work of Firth in the 1950's it has become common within anthropology to make a distinction between organization and structure that is analytically similar to the distinction between institution and culture in Figure 1.[41]

A second reason for looking to anthropology is the large body of ethnographic studies that have become available since mid-century. It is the insistence on descriptive realism that makes the use of these ethnographic studies so potentially attractive. The descriptive detail often makes it possible for economists or other social scientists to reinterpret the original material.[42] Relatively few economists have been willing to make the investment in time needed to generate the information necessary to assure a reasonably adequate understanding of even economic relationships at the village or community level. Two important exceptions are the Laguna studies by Hayami and Kikuchi and the Palanpur studies by Bliss and Stern.[43]

Ethnographic studies are now available for many peasant and urban communities as well as the primitive isolates that were the traditional focus of anthropological research. There are two major obstacles to drawing

on anthropology for an understanding of the relationships between cultural endowments and technical and institutional change. The first is that ethnographic studies have, as a result of a commitment to learning primarily through field work, often avoided embodying their interpretation either in a historical context or in a contemporary political and economic context.[44]

The second obstacle is the intellectual fragmentations within the discipline of anthropology. The economist who attempts to "read anthropology" is confronted by many anthropologies: "British functionalism, French structuralism, cultural ecology, and psychological anthropology; efforts to synthesize Marxist approaches with structuralism, semiotics, and other forms of symbolic analysis; efforts to establish more encompassing frameworks of explanation such as sociobiology to achieve the aim of a more fully "scientific" anthropology; efforts to merge the influential study of language in anthropology with the concerns of social theory."[45]

In spite of its fractionated appearance it is possible to make a separation, perhaps somewhat oversimplified, between the several "materialist" and "interpretive" schools of anthropology.[46] The materialists' perspective interprets differences in social life and behavior as arising out of universal physiological, economic and political concerns. The culture theory and symbolic anthropologists argue for a deeper study of the meaning of life and the importance of interpreting behavior in terms that are significant to the society being studied.[47] In the next sections I draw particularly on the work of Marvin Harris and Marshall Sahlins as representatives of the materialist and interpretive schools because the polemical style employed in their recent work has helped to sharpen the issues that I want to examine.

Materialist Perspectives

Because of the pervasive role played by resource endowments and self interest in economic analysis, the materialist approaches seem, at first instance, more congenial to economists. There is a strong (fossilized) tradition of historical materialism in anthropology.[48] In this tradition, culture (superstructure) is viewed as so largely determined by the forces and relations of production (Figure 2) that it offers little in the way of insight or additional analytical power to economists. Little weight can be given to cultural differences in a world that is inevitably moving toward a single integrated economic and political system and in which culture constituted primarily a source of resistance that has to be taken into account in planning for change.[49] The older Marxian school would seem to have little difficulty in agreeing with Harry Johnson, in his comment on Canadian concerns about American cultural hegemony, "You don't have to be brainwashed by the Americans...to find that a refrigerator is a useful item of household equipment...Our world is riddled with all sorts of differences in culture and opinions which are essentially reflections of different stages of economic development rather than deep-seated divisions among mankind."[50]

The cultural materialist perspective, which has been articulated most forcefully by Marvin Harris, embraces a richer and less ideological materialism than the traditional Marxist approach.[51] The cultural materialist tradition puts Malthus back on the stage from which he was banished by Marx. Marx held that: "technology discloses man's mode of dealing with nature, the process of production by which he sustains his life and thereby also lays bare the mode of formation of his social relations,

and of the mental concepts that flow from them."[52] Harris insists that the modes of production and reproduction determine (probabilistically) domestic and political economic organization and behavior which in turn determine (probabilistically) the superstructure (Figure 3).

The cultural materialist framework and research agenda is similar, in many respects, to the induced institutional innovation framework and agenda. Objectively determinable behaviorable components include (a) an infrastructure, defined to include the ecosystem and the modes of production and reproduction; (b) a structure which includes the elements of domestic and political economy; and (c) a superstructure that includes both objectively determinable (etic) and culturally specific (emic) components.[53] The Harris superstructure is highly congruent with the cultural endowments category in Figure 1. His structure component is largely congruent with the institutions component in Figure 1.

The cultural materialism research agenda is also quite similar to the induced innovation agenda: "Cultural materialists give highest priority to the effort to formulate and test theories in which infrastructural variables are the primary causal factors. Failure to identify such factors in the infrastructure warrants the formulation of theories in which structural variables are tested for causal primacy. Cultural materialists give still less priority to exploring the possibility that the solution to sociocultural puzzles lies primarily within the behavioral superstructures; and, finally, theories that bestow causal primacy upon the mental and emic superstructure are to be formulated and tested only as an ultimate recourse when no testable etic behavioral theories can be formulated or when all that have been formulated have been decisively designated. In other words,

cultural materialism asserts the strategic priority of etic and behavioral conditions over emic and mental conditions and processes, and of infrastructural over structural and superstructural conditions and processes; but it does not deny the possibility that emic, mental, superstructural and structural components may achieve a degree of autonomy from the etic behavioral infrastructure. Rather, it merely postpones and delays that possibility in order to guarantee the fullest exploration of the determining influences exerted by the etic behavioral infrastructure."[54]

When one examines the research studies conducted within a cultural materialist perspective, the conceptual similarity with studies conducted within the induced institutional innovation framework is further reinforced. A useful example is the attempt by Harris to understand why, in the southwestern India state of Kerala, the mortality rate of male calves is much higher than of female calves, while in the northern state of Uttar Pradesh the mortality rate of female calves is much higher than that of male calves.[55] In both areas farmers indicated a strong personal commitment to Hindu prohibitions against the slaughter of domestic cattle. They insisted that they would never kill or starve one of their cattle. Yet economic factors were, in both provinces, powerful predictors of cattle sex ratios. In Kerala cattle were valued primarily for milk rather than traction; in Uttar Pradesh cattle were valued primarily for traction rather than milk. This is precisely the modification in cultural behavior that would have been predicted using the micro-economic analysis employed in studies drawing on the induced institutional innovation perspective. Compare, for example, the interpretation by Hayami and Kikuchi of the changes in labor relations on

Laguna rice farms associated with the introductions of higher yielding rice varieties.

In other studies, Harris advances a materialist interpretation of cannibalism and the Biblical prohibition against pork consumption. These "curiosities" represent test cases for the materialist hypotheses. As Gans notes, "if he can explain such bizarre, apparently functionless culture traits by the principle of cultural materialism, then surely he can account for the main run of cultural development, the economic rationality of which is at least plausible on the surface."[56]

What help can one draw, for extending the induced innovation model to include cultural endowments, from the materialist approaches in anthropology? It seems quite clear that ethnographic studies drawing on a materialist perspective can be quite useful to economists who are attempting to utilize the tools of micro-economic analysis to understand the impact of resource endowments and technology on differences in institutional performance and on institutional change. The ethnographic studies would be even more useful if their authors were more fully informed in modern micro-economic theory and the methodology used in the empirical testing of hypotheses generated from the use of micro-economic theory. Familarity with the "new household economics" literature would be particularly useful.[57,58]

Neither the current research output nor the research agenda of the cultural materialist school is, however, likely to provide much information on the questions that I have attempted to raise in this paper -- what guidance can we obtain from anthropology in attempting to understand how differences or changes in cultural endowments affect behavior leading to technical and institutional change? This same point has been stated in a

somewhat different manner by Gans, who notes that in the cultural materialist strategy the "existence of human society and its fundamental institutions is simply taken for granted and hypotheses are formulated to explain certain of its features as adaptations to infrastructural conditions."[59]

Interpretive Anthropology

From the 1920's until well into the 1960's there was a continuing struggle to resolve the conflicts between the Boas-Malinowski "cultural anthropology" school, which focused its attention on the identification of "culture patterns," and the Radcliffe-Brown "social anthropology" school, which emphasized social structure. The main difference between the two schools is that the pattern approach subordinated social structures to culture while the structure approach subordinated culture to social structure. Singer notes that "the structural theory considers an "explanation" achieved when it has shown how each part contributes functionally to the existence and continuity of a particular type of social structure while the pattern theory's desideratum for "explanations" is to show how each part fits into an overall configuration or stylistic pattern of the culture."[60]

During the 1960's and the 1970's efforts emerged, drawing on a wide range of philosophical and social science traditions, to direct anthropological theory and ethnographic research to "elucidate how different cultural constructions of reality affect social action."[61]

Claude Levi-Strauss and Marshall Sahlins have been among the most outspoken critics of materialist interpretations of cultural development. In the work of Levi-Straus concern is shifted from the burden of history--

from the role of social structure or social systems--to the role of mental phenomena as a source of social change.[62] The evolution of kinship structure and language are taken as the models for social change. In terms of Figures 2 and 3 Levi-Straus is a superstructure determinist.

Sahlins, particularly in his later work, insists that material forces play no independent role in the formation of culture--that resource endowments and the entire natural world are as much cultural constructions as ideas and values. In Sahlin's words, "... anthropology can no longer be content with the idea that custom is merely fetishized utility."[63] He dismisses the conceptual basis of materialist anthropology: "The material forces in production contain no cultural order, but merely a set of physical possibilities and constraints selectively organized by the cultural system."[64] He suggests, somewhat more pungently, that materialist theory assumes that "manure is thicker than blood." [65]

In a more positive tone Sahlins argues: "The real issue posed for anthropology by all ... practical reason is the existence of culture. The utility theories have gone through many changes in custom, but always play out the same denouement: the elimination of culture as a distinctive object of the discipline. One sees through the variety of these theories two main types.... One type is naturalistic or ecological... while the second is utilitarian ... invoking the familiar means-ends calculus of the rational human subject."[66] But neither the naturalistic nor utilitarian theories have been able to explain fully the anthropological discovery that the creation of meaning is the distinguishing quality of man.[67]

In these more extreme reactions to materialist approaches there does not seem to be any way to connect the process of cultural change to changes

in the macro-economic political or historical environment. Just as intellectual history runs the danger of losing its authority when not linked to institutional history, cognitive and symbotic anthropology needs to maintain a continuing dialogue with the study of social organization and institutional change. At this stage the interpretation offered by interpretive sociology often strikes me as excessively personal and idiosyncratic.

An important exception is illustrated by the effort by Clifford Geertz to examine the formation and impact of ideology.[67] Geertz argues that formal ideologies first emerge and begin to guide social thought and political action at the point at which a political system begins to free itself from the dominance of received tradition -- "from the direct and detailed guidance of religious or philosophical canons on the one hand and from the unreflective precepts of conventional moralism..."[69] Geertz argues further that it is the ability of "ideologies to render otherwise incomprehensible social situations meaningful, to so construe them as to make it possible to act purposefully within them, that accounts...for the intensity with which, once accepted, they are held."[70] Removing the study of ideology from the realm of the irrational or pathological to a phenomenon that can be treated analytically enables us to attempt to understand the U.S. South in the nineteenth century, the interwar political and economic events in Germany, Italy and Japan, China in the 1930's and 1940's, and the recent history of Iran and several other Muslim societies as reflecting common sources of social, political and economic stress. In terms of Figure 1, Geerts has added substance to relations (d) and (D). His analysis

provides deeper insight into the statistical regularities between economic growth and social tension observed by Adelman and Morris.[71]

Cultural Change and Development

In concluding this paper it is useful to return to the original motivation that has led to the attempts to explore the sources and impact of institutional and cultural change. The value of social science knowledge is that it offers the possibility of lowering the cost of institutional change, including the cost of conflict resolution.[72] If this view is valid, the modification of ideology through advances in social science knowledge should pay very high dividends.

There have already been important social benefits from the ethnographic research conducted by anthropologists. Ethnographic research, through its examination of alternative culture patterns, has made substantial contributions to institutional reform. Boas used the results of comparative ethnographic research to challenge racist views of human behavior. Margaret Mead and Ruth Benedict began, in the 1930's and 1940's, to interpret the relevance of their studies of other cultures for the organization and practices of American family life.

In the United States cultural anthropology exerted a significant impact and provided empirically based support for a liberal reform agenda in social policy. It is doubtful that the interpretations of ethnographic studies can again play a similar role. Appeals to the exotic now encounter greater skepticism. Differences between U.S. and Japanese economic performance are much more complex than earlier appeals of cultural differences suggested.

If we take as our research agenda a more rigorous understanding of the sources and impact of cultural change, what help can be obtained from

anthropology? The response must be ambiguous. The materialist research agendas have been valuable in confirming the impact of resource endowments and technology on institutional changes. But the materialist schools, whether drawing on Marxist or neo-classical traditions, have little to offer in helping to understand the impact of cultural endowments on technical or institutional change or on the use or growth of resource endowments. Materialist anthropology has avoided, almost as thoroughly as economics, the impact of cultural endowments.

Interpretive anthropology, despite its tendency to slip into idealism and romanticism, places the explanation and impact of cultural differences and cultural change at the center of its research agenda. Over the longer run this effort is likely to become more helpful to those of us working in the field of development economics than work carried out within the materialist agenda. My own perspective, as suggested in Figure 1, is that the relationship among cultural endowments, resource endowments, technical change and institutional change will turn out to be dialectical rather than running linearly from culture to resources, technology and institutions. In anthropology a similar view has been associated with the work of Leslie White.[73] Sahlins, in his criticism of White, comments that "the technological determinism of culture in White's evolutionary theory lives side by side with the cultural determinants of technology in his symbolic theory."[74] In my view this should be considered as a merit rather than a fault. Yet the view will be troublesome to many economists. It implies great difficulty in resolving the "identification" problem.

One response to these conclusions is to insist, given the power of the results achieved thus far from both the micro-economic agenda (push micro-

economic analysis of institutional change as far as it will go) and the materialist agenda in anthropology (explore the implications of infrastructure determinism), that few gains would be achieved by allocating additional resources to attempts to understand the sources and impact of change in cultural endowments. This is equivalent, however, to ignoring the "missing variable" problem. It is important that interpretive anthropology continue to pursue an agenda that will in time enable us to more adequately identify the sources and impact of cultural change. Only if this research agenda is successful will it become feasible for anthropologists and economists to collaborate to incorporate the role of cultural endowments into economic development analysis and into institutional design and reform.

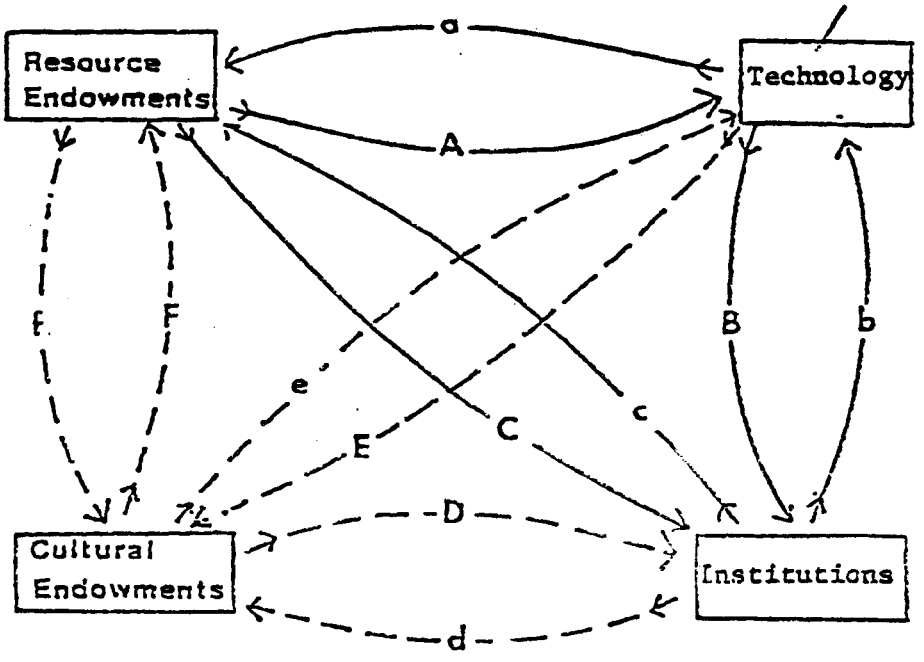


Figure 1.0 The Induced Innovation model of the interrelationships between changes in resource endowments, cultural endowments, technology, and institutions.

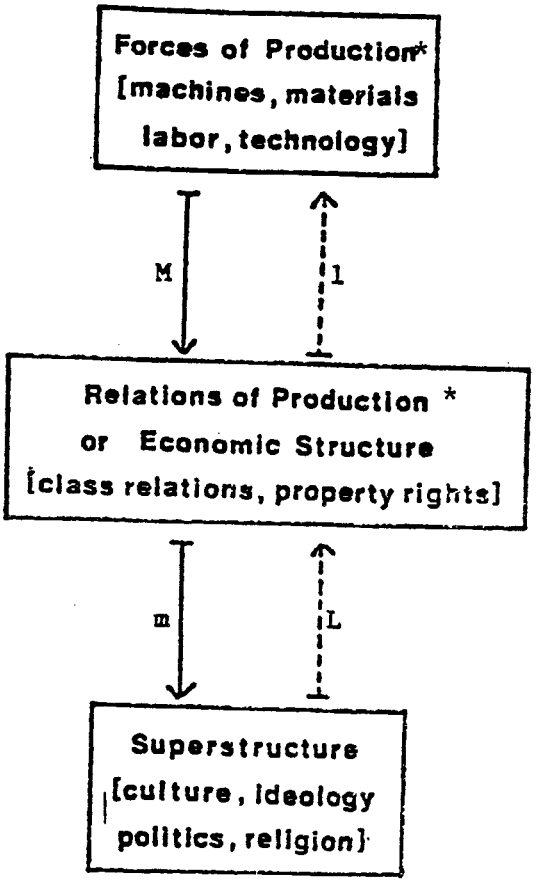
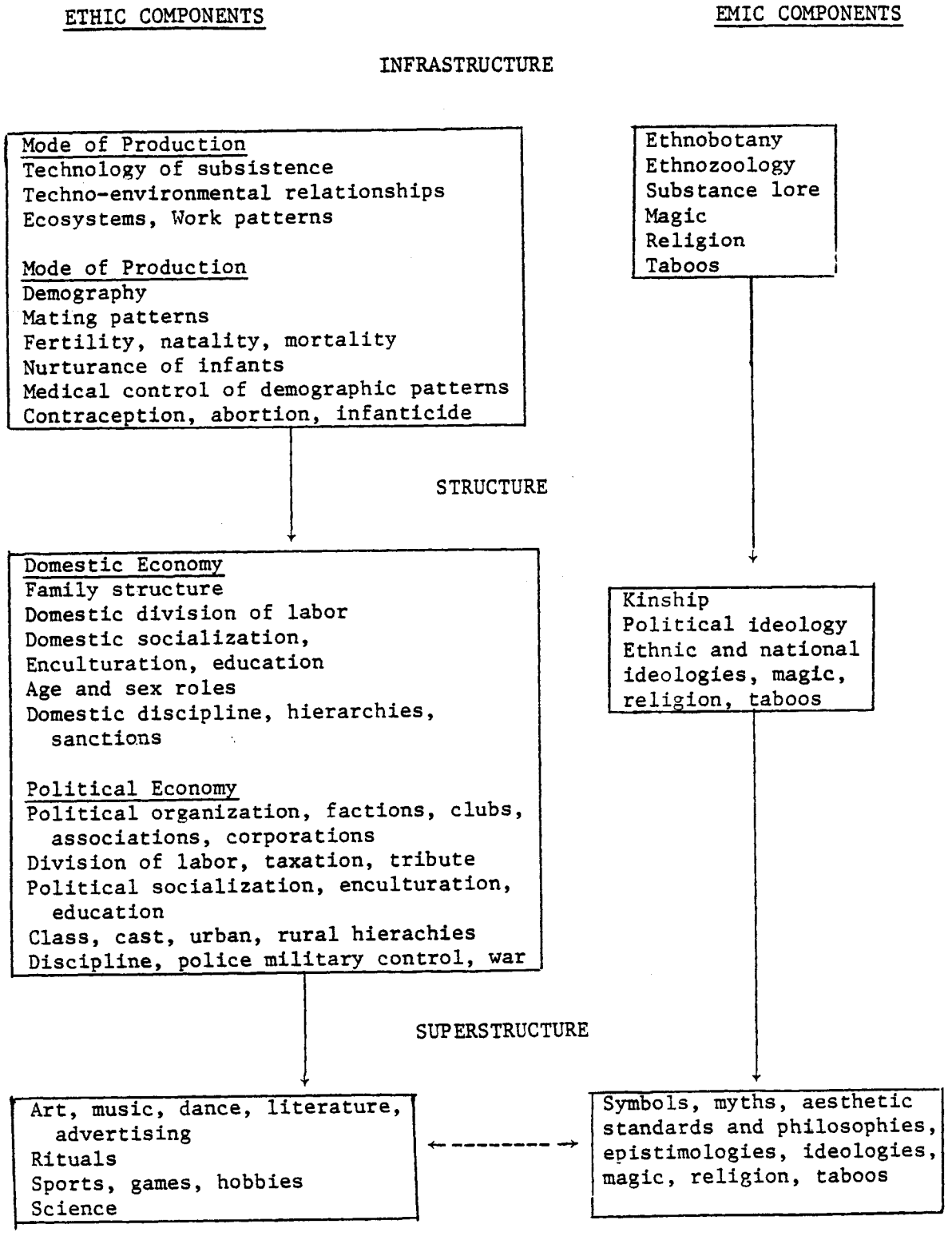


Figure 2.0 A Marxian Model

*The forces of production and the relations of production together make up the Economic Base or Mode of Production.

Figure 3. The Cultural Materialism Model



Source: Adapted from Marvin Harris, Cultural Materialism: The Struggle for a Science of Culture (New York: Random House, 1980), pp. 51-54.

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53. The use of the terms emic to designate culturally specific, and etic to designate universal models of interpretation is based on the analogy with the terms phonemic and phonetic in linguistics. Emic statements refer to logico-empirical systems whose phenomenal distinctions or "things" are built up out of contrasts and discriminations significant, meaningful, real, accurate or in some other fashion regarded as appropriate by the actors

themselves. An emic statement can be falsified if it can be shown that it contradicts the cognitive calculus by which relevant actors judge that entities are similar or different, real, meaningful, significant or in some other sense "appropriate" or "acceptable." (See Harris, The Rise of Anthropological Theory, p. 571.) Etic statements depend upon phenomenal distinctions judged appropriate by the community of scientific observers. "...Etic statements are verified when independent observers using similar operations agree that a given event has occurred or about the determinants of the behavior of classes of people. Predictive failures in that corpus require the reformulation of the probabilities or the description of the whole" (p. 575).

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57. See H. P. Binswanger, R. E. Evenson, C. A. Florencio, and B. N. E. White, eds., Rural Household Studies in Asia (Singapore: University of Singapore Press, 1980).

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60. M. Singer, "The Concept of Culture," p. 533.

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Appendix

Definitions of Culture

The definitions of culture in this appendix were selected to illustrate the progressive narrowing of the concept of culture in anthropology.

1. "Culture...is that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society."[1] (Does not distinguish social organization and social institutions from a general concept of culture.)

2. "Culture consists of patterns, explicit and implicit, of and for behavior acquired and transmitted by symbols, constituting the distinctive achievement of human groups, including their embodiments in artifacts; the essential core of culture consists of traditional (i.e., historically derived and selected) ideas and especially their attached values; culture systems may, on the one hand, be considered as products of action, on the other as conditioning elements of further action."[2]

3. If...society is taken to be an organized set of individuals with a given way of life, culture is that way of life. If society is taken to be an aggregate of social relations, then culture is the content of those relations. Society emphasizes the human component, the aggregate of people and the relations between them. Culture emphasizes the component of accumulated resources, immaterial as well as material, which the people inherit, employ, transmute, add to and transmit."[3]

4. "Culture is not a material phenomenon; it does not consist of things, people, behavior, or emotions. It is rather an organization of these things. It is the forms of things that people have in mind, their models for perceiving, relating, and otherwise interpreting them."[4]

5. "We suggest that it is useful to define the concept culture for most usages more narrowly than has been generally the case in the American anthropological tradition, restricting its reference to transmitted and created content and patterns of values, ideas, and other symbolic-meaningful systems as factors in the shaping of human behavior and the artifacts produced through behavior. On the other hand, we suggest that the term society--or more generally, social system--be used to designate the specifically relational system of interaction among individuals and collectivities.... To speak, then, of the analytical independence between culture and social system is, of course, not to say that the two systems are not related...."[5]

Note: A purpose of the Kroeber-Parsons paper was to distinguish the proper subject matter of anthropology (culture) and sociology (social system).

6. "Radcliffe-Brown and other adherents of the theory of social structure tended to avoid using the term "culture" after the early 1930's. This avoidance is based on the claim that social anthropology studies social structure, not culture....[6] the theory of social structure can dispense with the word "culture" (because): it has incorporated the culture concept into the core of the theory, for the theory of social structure deals with social relations not simply as concrete actually existing objects of observations but as institutionalized and standardized modes of behavior and thought whose normal forms are socially recognized in the explicit or implicit rules to which the members of a given society tend to conform.[7]

7. During the last half century there "has been a ... shift from an interest in artifacts and other external manifestations of material culture to an almost overriding interest in social culture and in mental culture."[8]

8. "Culture...refers to the learned repertory of thoughts and actions exhibited independently of genetic heredity from one generation to the next."[9]

9. "Culture in the narrow sense is the most problematic element in modern society....[10] The independent variable of historical evolution is not the economic, nor the technical, nor indeed the aesthetic, but the ethical. The only meaningful sense of the word "progress" is ethical progress; and it is in this sense that it in fact prevails when we speak of the progress from the constraint of ritual to the freedom of art."[11] The "means of preserving order...are at the very heart of culture and more immediately relevant to its specific creations than the more general need to increase appetitive satisfaction ....[12] The abandonment of order in a mad rush to satisfy appetites is a true breakdown of culture."[13]

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